



identified as the aimed N-biotinylcysteic acid using MALDI-TOF MS.

(2) Coupling of N-biotinylcysteic acid to peptide

As a model peptide, laminin pentapeptide (PEPTIDE  
5 INSTITUTE, Inc.) was used. The amino acid sequence of the  
laminin pentapeptide is as follows: Tyr-Ile-Gly-Ser-Arg-NH<sub>2</sub>  
(SEQ ID NO: 1). In this sequence, the arginine residue is  
amidated and is represented as Arg-NH<sub>2</sub>. 2μl of 1mM dimethyl  
formamide solution of N-biotinylcysteic acid, 0.6μl of  
10 dimethylformamide solution containing 0.5M HBTU (2-[1H-benzo  
triazole-1-yl]-1,1,3,3- tetramethyluronium hexafluoro  
phosphate) and 0.5M HOBt (N-hydroxybenzotriazole), and 0.6μl  
of 1M dimethylformamide solution of diisopropylethylamine were  
mixed with one another. The mixture was then added to 2μl of  
15 2mM dimethylformamide solution of laminin pentapeptide, and the  
reaction was allowed to proceed at room temperature for 30min.  
After the reaction was completed, the reaction mixture was  
diluted with 0.1w% aqueous solution of trifluoroacetic acid and  
was subjected to PSD analysis by MALDI-TOF MS.

20 Fig. 1 shows the PSD spectra of laminin pentapeptide that  
is coupled to N-biotinylcysteic acid. Fig. 2 shows the PSD  
spectra of laminin pentapeptide that is not coupled to  
N-biotinylcysteic acid. In each figure, horizontal axis  
indicates the mass-to-charge ratio of the ions (m/z), whereas  
25 vertical axis indicates the relative intensity of the ions